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ORIGINAL LECTURES.

CLINICAL LECTURE ON SYPHILIS IN RELATION TO MARRIAGE.

BY DR. ALFRED FOURNIER,
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Notes by Dr. Charles W. Dulles.

GENTLEMEN,—The question, whether a man who has contracted syphilis may marry, is one which is not infrequently asked of a physician, and one which he may not avoid, notwithstanding that it casts upon him the gravest responsibility. If his answer be a positive "No," it is apt to involve for the inquirer celibacy, with irregularities the temptation to which he cannot resist, the deprivation of all that is dear in the idea of family, and many evils which may result from these. If the answer be "Yes," there may ensue equally disastrous consequences. The marriage relation may be the means of communicating to his wife the disease under which he labors; and his children may die before their birth, or come into the world unfit to exist. What can be more terrible than the position of such a man *vis-à-vis* his wife and children? Remember this, gentlemen, when asked this momentous question.

But, from what I have said, are you to conclude that syphilis is an unsurmountable obstacle to marriage? No, it must not be so considered. This I may say with positiveness, since there have been cases enough to demonstrate its truth; cases where the disease has been communicated to neither wife nor children. I have myself seen fifty-one such, and eighty-two children born and living healthy in spite of the previous disease of their father. When I reflect upon these happy families, I cannot but think what an error I should have committed had I always said an inflexible "No!" to the question whether marriage is permissible after contracting syphilis.

My answer to this question is not "No," but "Yes,"—under certain conditions. It must be well weighed that syphilis is dangerous in three ways: 1st, to the wife; 2d, to the child; 3d, to the family relation.

First, then, syphilis is dangerous to the wife, for she may contract the disease from manifestations recurring after it seems to have subsided, or from secondary lesions upon any part of the body, by means of the multiplicity of contacts and *rapports*, so incessant and intimate, of married life. It is very rarely that under such circumstances a woman escapes contagion from a man with secondary syphilis.

But besides this there is a means of contagion less apparent, less likely to be suspected. A young woman may present manifestations of secondary syphilis and no sign of a primary lesion. The husband, in distress, declares that he himself has had no lesion since he married, that, with your warning against this danger in his mind, he examined himself carefully and constantly, and that he trusted your assurance that all was right. How can this be accounted for? Infallibly in such a case you find that the wife is at that time pregnant, or that she has recently aborted. The syphilis was communicated by conception. Of the way in which this takes place we know absolutely nothing. Of the fact my experience does not permit me to doubt.

In the second place, besides the danger to the wife and even should she escape, syphilis involves the child in danger. The error of teaching that paternal influence is not to be dreaded, is enormous. When it is seen how the father's influence makes itself known in the offspring, in form, shape, height, and tendency to special diseases of body and mind, how can we deny the force of analogy in regard to syphilis?

There are cases, it is true, where the father has not communicated this disease to his child, and enough of them,—as, for example, where a syphilitic man had, at about the same time, a child by his wife, who was syphilitic, and so was the child, and one by his mistress, who was not syphilitic, and her child was sound. A second instance I can quote of a syphilitic man whose child was born healthy and contracted the disease two years later from its father's kisses.

But this concession is only one side of the question. On the other hand, it is a rare occurrence, but true, that a father has begotten a syphilitic child and the mother remained unaffected. Besides which, we must take into consideration the important matter of abortion, which occurs so often

with no other cause discoverable upon the most searching examination. When such cases come under your notice, where abortion has followed abortion in women apparently healthy, you may suspect, and will usually find, that it is due to the syphilitic influence of the father upon the fœtus.

Thus much of children whose father alone is syphilitic. When both parents are diseased we find that the children die *in utero*, or are born with syphilis, or with a miserable, weak, cachectic constitution, ready to fall a prey to disease of almost every sort. I can recite you the case of a woman who, having given birth to three healthy children, contracted syphilis from her husband and then had four still-births and three abortions in succession.

The children of the second class, born with syphilis, for the most part do not live long. The disease soon terminates their existence. Those of the third class may show their debility at once, or give no sign, looking well the day of their birth and dying the next, without apparent cause; or they may grow awhile, delicate and feeble, with little power to resist disease, and predisposed to scrofula, idiocy, and convulsions.

In the third place, syphilis is dangerous to the family relation. I am not a preacher, gentlemen; but I speak to you *en honnête homme*. We may not, in the discharge of our professional duties, overlook the importance, to the state and to mankind, of the social relations. And so I feel that a man with uncured syphilis has contracted a physical debt which he must inevitably pay; and I ask you, Can he marry honestly? Suppose he gets children, and then falls sick and cannot work to support his family. Dare a man risk this? No! If he marries uncured, it is an immoral act, an act of injustice to the community. Alas! such things are not uncommon. I know a case of a man who, after marrying and getting children, lost his nose by ulceration, and became an object of disgust to all who knew him, unfitted for his former associations and branded with the consequences of an almost forgotten disease. Another man had a late affection of his eyes, and lost them both, by which his means of support was gone and his family became dependent upon the city. Another, a doctor, impotent from paraplegia, came into the same condition. Another, after a few months of married life, died, leaving his young wife *enceinte*. Another had cranial exostoses, a cerebral affection, and epilepsy; lost his reason and his money, leaving his wife and children in poverty.

In view of all this, our bounden duty is to declare to a questioner what may be the consequences of a marriage after the contraction of syphilis. Where there is serious danger of such results as I have named, no man can, no man has the moral right to take a wife and beget children.

But this rule must be most carefully applied; for, as I have said already, we may not invariably refuse our consent to marriage after syphilis has been contracted.

Now, however, we approach grave difficulties, and are confronted with the usual embarrassment of proceeding from theory to practice.

When and under what conditions, then, is marriage morally permissible to one who has contracted syphilis?

The conditions that are indispensable I believe to be the following:

1st. *Absence of actual manifestations.*

2d. *Advanced age of the disease.*

3d. *A period of immunity since the last outbreak.*

4th. *A non-menacing character of the disease.*

5th. *Adequate specific treatment.*

It might be thought somewhat superfluous to say that *no one should marry who has actual manifestations* of this disease,—that these constitute an absolutely insurmountable barrier,—and yet I have seen men bold enough to ask the question, and have even seen two cases of marriage with a chancre at the time. Some men act thus from ignorance; some cynically brave all the danger; some, from weakness, fear of exposure and scandal, allow the consummation of a union into which they should by no means enter: but for none is there a reason which can justify them.

The second condition, *advanced age of the disease*, depends upon the fact that the fresher, the younger the attack of syphilis, the greater is the liability to accident from it. Thus the presence of secondary manifestations constitutes a very formidable danger; and even when they have disappeared they are apt to return. There are certain situations, also, as about the mouth and genitals, where they may be present as simple erosions and deceive a most careful observer. This fact of the decreasing dan-

ger as time goes on is shown in cases where at first a healthy mother has aborted, and later, without her husband's being treated, she has ceased to abort and given birth to healthy children. I knew a mason who, when he married, had a syphilitic roseola. His wife was infected, with the following issue of her pregnancies: in the first she aborted at four months, in the second at five, the third child died before term, the fourth and fifth were born syphilitic, and the sixth, seventh, and eighth showed no sign of the disease.

The precise time when a previously syphilitic person may marry is hard to determine, and must be considered with due estimation of the sort of treatment that has been employed, and its effect; but I may say that I think the minimum time since infection should be three or four years. Before the lapse of three years I will not permit it, as I have seen the saddest results follow such a course. Later the probabilities are better, and with the exercise of proper care the dangers are not great.

The third condition I mentioned was *a certain period of immunity since the last outbreak*. By this I mean an *absolute* immunity for a certain length of time. This marks the subsidence of the acute stage, called secondary, and shows the effect of treatment as well as the character of the disease in each case. If these are such as to encourage you, I think—while no invariable period can be set down—that we may consider eighteen months as a minimum, under which I would not myself sanction marriage.

The fourth condition is a *non-menacing character of the disease*. This is a most important consideration. When syphilis yields rapidly to treatment, it is a favorable sign; and, conversely, if the form is grave and less tractable, it is more dangerous, and much greater caution must be used. To enumerate some of the characteristics which are grave, I might mention multiformity, multiplicity, or intensity of lesions, a seemingly deep impression upon the general health and stubbornness against treatment. Besides this, there are certain organs, the implication of which is very serious, as the brain and spinal cord; lesions of these being extremely dangerous and apt to recur. I should require a very long period of immunity in such a case. I remember a young man, whose arm had been partially paralyzed, who married in spite of my warning, and in ten days had an attack of paraplegia, followed by insanity and speedy death in an asylum.

Finally, an indispensable condition is *adequate specific treatment*. The individual who has contracted syphilis is dangerous, and must be treated. This is the best protection to the community, and needs no argument to support it. Syphilis properly treated rarely progresses to the tertiary stage, while that which is not properly treated almost always does. Treatment diminishes its contagiousness and hereditary transmissibility. Many cases could be cited to illustrate this, where proper treatment of a husband has put a stop to his wife's aborting, and where abortions consequent upon syphilis of both husband and wife have ceased and healthy children been born. It is especially important that at the time of procreation both husband and wife should be under treatment. I know a case where a syphilitic woman, who had aborted seven times, went under treatment, and gave birth in the eighth pregnancy to a healthy child, and then to another in the ninth. She now omitted treatment, and her tenth pregnancy resulted in a syphilitic child that died in six months. Returning to treatment, she became pregnant again and had a healthy child.

Adequate treatment, therefore, is a capital and essential condition to marriage of a syphilitic.

I have thus, gentlemen, laid down what I think are the conditions upon which one who has contracted syphilis may marry. It is not an invariable programme, but simply the result of my personal observation, and what may, indeed, be modified in the light of subsequent information. With these considerations in my mind, when the question we have been studying is presented to me, I feel sometimes quite sure of my ground, and speak out positively and at once. At other times I do what you will doubtless have to do, wait and observe; in doing which, I likewise explain the case to my patient, and impress him with the importance of being as careful as possible in a matter so grave, and which is at best a calculation of probabilities. On one side there is danger which cannot be overestimated, on the other comparative health, safety, and happiness.

If, then, we deal thus honestly and conscientiously with those who seek our ad-

vice in this serious matter, with due caution against the ills which may result from an unwise permission, and appreciation of the unhappiness which may follow an unnecessary refusal, we shall execute an office salutary to the state and of the greatest benefit to our fellow-men.

ORIGINAL COMMUNICATIONS.

NITRITE OF AMYL AND MORPHIA IN THE CONVULSIONS OF VERY YOUNG CHILDREN.

BY HUGO ENGEL, M.D.,
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HAVING resided now for about twelve years in a district of Philadelphia where the population consists mainly of Germans, the procreativeness of whom is well known and perhaps due to the fact that they do not employ the modern means for the destruction of the young life before it leaves the uterus, I of necessity have frequently been called in cases of idiopathic convulsions in young children. I call them idiopathic if I find no apparent cause, except perhaps teething, for them, and do not include under this head those convulsions which so often usher in certain exanthematous and other febrile diseases (from errors in diet and worms, for instance) in the young. I generally got along right well with a warm bath, followed by diaphoretics, external stimulations, morphia, and bromide of potassium, to which I during the last few years added hydrate of chloral. Whenever these proved not sufficient, the inhalation of chloroform was resorted to; and in a few cases I gave a hypodermic injection of quinine, but dropped this remedy soon, as utterly useless for the purpose for which it was wanted.

Three consecutive cases, that notwithstanding all my exertions died, determined me to try at the next opportunity a somewhat different treatment, after my usual procedure had proved a fruitless one. Since that time four more cases have come under my observation. The first yielded rapidly to the old treatment; but of the following three, two, and especially the last one, were of such a stubborn character and so near the fatal end that my former way of managing them would have undoubtedly led to none but a deplorable result. The fourth, or rather the third, case was some time ago a mild attack of the last one. The treatment I employed in the two bad cases was so eminently and so at once successful that I feel it my duty to report it, either to elicit other reports or to stimulate further trials. I shall give the history of only the worst one, as it differs in no essential point from the other, and was saved by the same treatment which I had, as well as perhaps every physician, employed in adults, but never before in children under two years of age.

About two months ago I was called by Mr. R., an intelligent German tailor, living near Fifth and Callowhill Streets, to come to his child, then about sixteen months old, as it was suffering from convulsions. I was at the time occupied with hunting for an artery in a scalp-wound, and gave Mr. R. the necessary directions and prescriptions, to follow out my former treatment, promising to be there as soon as possible. When I reached his house, half an hour later, the child was asleep and well, the convulsions either having yielded to the treatment, especially the chloral, or ceased of their own accord. While there, I made an examination of the child, and inquired into the history of the case and family. No cause was to be found,—no error in diet, no worms, but a slight fall, so slight that it might have acted as an exciting, but surely not without a predisposing cause. The mother's side gave a neuropathic history, and Mr. R. told me that he had lost so far three children by convulsions, and that they all had died in their second attack. The first one was always a mild one, as the one this child had, but the second happened some months later and was the severe and fatal one. Calling again the next day, and finding the child totally well, I examined it yet more carefully. There was no bump on the skull, no sign of a depressed bone, no heart-lesion, no teething, no albumen in urine; nothing whatsoever, except a very long prepuce, which I advised the father to have circumcised. He assented, but postponed the operation, for reasons of his own, till near Christmas. This ended the affair at that time.

About one week ago, on arriving home from my morning visits, about half-past twelve o'clock P.M., I found an order for me to come as soon as possible to Mr. R.'s. I went right away, and found the same child, now eighteen months old, again in convulsions, which had begun at about half-past eleven o'clock A.M. But this time the convulsions were really horrid, and presented the worst form I ever had met with in children. They seemed to be exactly symmetrical, and no muscle of the whole body was unaffected. There was foam before the child's mouth; it had bitten its

tongue; the thumbs were flexed, and the teeth inseparable. The face, lips, gums, and the whole surface of the body looked pale, and a clammy perspiration, or rather dew, was distributed all over. The pupils were both evenly and so dilated that only the smallest imaginable ring of the iris was visible, and they were turned upwards. The father again gave me the history of a slight fall in the morning, and told me that the child had seemed to be teething, of which I, though, could detect no evidence.

From the time I saw the child first until half-past five o'clock P.M., I tried all the means above mentioned. I called there about every hour, and up to the last-named time there had been about half an ounce of chloral and a little more bromide of potassium injected into its rectum. Chloroform had been tried twice, each time as long as appeared safe; the convulsions had seemed to cease for that time, but only to return with increased vigor. The father told me "that he considered further efforts useless; the case was exactly like those of the other three children, and he knew that there was no hope," etc. I now explained to him that I would try yet another remedy, but that its application was dangerous, or, at least, not for such young children exactly determined yet, and that the child possibly might die during its application; but that all hope was gone if something could not be done speedily. He gladly assented, and I sent for my friend Dr. Mason McCollin, to assist me.

The child had then the appearance as if every minute would be its last,—deadly pale, the breathing being heard only occasionally and in a sort of spasmodic way, and the pulse evidently slowly but steadily becoming more irregular and weaker. Knowing that only a heroic treatment would do good, I proceeded as follows:

I injected into the subcutaneous tissue of the inner forearm one-fourth of a grain of morphia, and directly afterwards dropped five drops of nitrite of amyl on a handkerchief, applied it to the child's nose, and let it inhale, watching pulse, breathing, pupil, and general appearance in the mean time. After about thirty seconds, violent agitation set in; the convulsions became more spasmodic in character; then the face first, and afterwards the whole surface, assumed a purple hue; the child took one long, deep breath, and in not quite two minutes was deep asleep, breathing regular, pulse full and regular, though somewhat rapid, and ten minutes later the pupils were contracted.

My idea in adopting this treatment was the same as has led me and others to its use in adults. Whenever there is decided paleness of the whole surface in an individual affected with convulsions, showing an almost tetanic contraction of the arterioles, I apply the nitrite of amyl. According to Wood,*—whose work I would recommend especially to young practitioners, who have listened, perhaps, only to old-fashioned lectures on "opium, one of the very best hypnotics, etc., we have, given in the dose of so and so, the following preparations being officinal," and who wish to leave the old beaten track of this deplorable "materia medica reciting," and conform their treatment to our somewhat advanced knowledge on other points,—the action of nitrite of amyl is a peripheric one; therefore, by employing it, we get suddenly a filling of the arterioles with blood; the whole circulation and the blood-pressure are at once altered, and so is the condition which produced the spasm at the base of the brain. I remember, when about four years ago assistant in the clinic of that great teacher of medicine, Professor Da Costa, when he made the first experiment at the Jefferson College in a case of epilepsy with nitrite of amyl, how rapidly the ghastly white appearance of the affected individual changed to the deepest blush.

The morphia I added for several reasons. The dilated pupils and paleness of surface were an indication for me, and in my first case, when I applied nitrite of amyl in so young a child, the convulsions, after having ceased, returned, and only on the second application of the amyl, with the addition of a hypodermic of gr. one-sixth of morphia, sleep followed, which lasted only one hour, when the convulsions once more, but in a mild degree, returned, to cease then forever. This time I took, therefore, at once one-fourth of a grain. Another reason for using morphia was its usefulness in convulsions of sunstroke, and in cutting short, or even preventing, the cold stage of febris intermittens.

The child slept for about eight hours. Nearly two hours after the cessation of the convulsions the pupils were very much contracted, and there existed a rattling in the throat, and the respiration was in such a condition that the latter seemed to me midway between stertorous breathing and the tracheal death-rattle. The skin was still flushed, but no perspiration or blotched appearance visible. To be on the safe side, I injected gr. $\frac{1}{180}$ of atropia as an antidote to the morphia. Half an hour later, when Dr. McCollin saw the case for me,

* A Treatise on Therapeutics, by H. C. Wood, Jr. Philadelphia, Lippincott & Co.

about 11 P.M., the child was breathing quietly.

Except some slight fever and great dryness in throat, evinced by continuous thirst for nearly twenty-four hours, and by the frequent putting of its fingers deeply into the mouth, the child made a rapid progress to recovery, and was discharged by me a few days later. As the convulsions were at least epileptoid, and might return, I ordered gr. x of bromide of sodium, to be taken three times daily, intending to continue this treatment for a year or so, with slight alterations in the form of the bromides.

319 North Fifth Street.

REMARKS ON A CASE IN WHICH THE NECESSITY FOR TRACHEOTOMY WAS AVERTED BY THE SYSTEMATIC ACTION OF INTENSE COLD EXCITING FORCIBLE INSPIRATION.

BY M. O'HARA, M.D.,

Read before the Philadelphia County Medical Society, November 27, 1878.

THE remarks about to follow have been suggested by the progress of a case of acute laryngitis in a young child in which the recovery was effected by the persistent local application externally of intense cold, and from a condition which is ordinarily considered to demand the prompt performance of tracheotomy.

Paul M., 2 years old, was the fourth of a consecutive number of cases of scarlatina in the same family. He was attacked on January 4, 1878, with fibrinous discharge from the nostrils, becoming subsequently purulent. The entire throat was swollen, but free from deposit and unaccompanied with tumefaction of the cervical glands. Nasal respiration was obstructed, except when relieved by the frequent injection of solution of common salt and Labarraque's solution. This impediment continued an entire week, after which there was some discharge, but without serious embarrassment to nasal respiration.

On the 13th he was much improved, and permitted to leave his room to play in the parlor. At mid-day I found him with the first symptoms of acute laryngitis, as denoted by hoarseness, cough, tenderness on pressure over larynx, and fever. He was remanded to bed, counter-irritation with turpentine, hot fomentations, lime inhalations, and steam from boiling kettle in the room ordered. He was placed on calomel and bicarbonate of soda. If croupy symptoms supervened strongly, he was to be freely vomited every three hours. The nose was still systematically freed from accumulation of secretion by the use of injections.

He was kept in tolerable condition in this manner, no untoward symptom manifesting itself, until the next evening, 14th, when the syringing of the nose produced reflex spasm of the larynx (none of the fluid gaining access to the mouth), and it was given up.

From this time laryngeal respiration became embarrassed, and was getting worse and worse, until stridor occurred with each inspiration, and supra-sternal and infra-thoracic recession set in. He showed some signs of exhaustion, from insufficient oxygenation of the blood, apparently, rather than from accumulation of noxious matters in the blood.

15th, 11 P.M., Dr. Cohen saw the child with me; and it was considered by him, from the age of the child, and the fact that it was convalescing from scarlatina, and the persistence of nasal discharge, that tracheotomy held out but little hope of success, though otherwise it was strongly indicated by the physical symptoms.

In this opinion I could not concur, as it seemed to me the child was still vigorous. But, in the absence of circulatory obstructions or paroxysmal asphyxia, and the vigor of the child not being severely impaired, I thought it had presented nearly the same condition for some hours, that it was better to wait. The condition of the child showed stupor, from which he could be easily aroused. Inspiration was performed with very violent exertion of the accessory muscles of respiration, with marked recession of the intercostal spaces as well as the supra-sternal and infra-thoracic soft tissues; expiration being unimpeded, it was believed that these symptoms might possibly be due to paralysis of the muscles that dilate the glottis, rather than to actual tumefaction of the tissues, which would be more likely to impede expiration.

Acting on this supposition, it was determined to test the effect of local applications of ice-cloths to the neck and throat. In order to see it properly applied, I remained with the patient the entire night. Two large blocks of ice being procured, several strips of muslin were placed between them. The centre was applied to the neck, in front, crossed behind, and each end carried forward to the ear and front of ear. They were applied at intervals of two minutes, or less at first, until eight o'clock the next morning. Each application of the ice-cloth was followed by a forcible inspiration, distending the chest more and more fully at each repetition, until in the course of eight hours the inspirations were unaccompanied by any stridor and with but little recession of the soft tissues. Each application roused him from the stupor more and more, until at eight o'clock the resort to tracheotomy was considered out of the question. Then the applica-

tion was continued, at longer intervals of ten minutes, for twenty-four hours longer, for the abatement of the laryngitis. The case pursued the ordinary course of a mild catarrhal laryngitis, without further dyspnœa, but with some congestion of the lungs. The attendance upon the patient ceased in a few days. He has since remained well.

The points to which I would wish to call the attention of the members of the Society are the obstruction of the nares as the primary phenomenon, the supposed paralysis of the posterior crico-arytenoid muscle, and the manifest action of the ice-cloths in producing an artificial inspiration.

Nasal stenosis is known to be productive of asthma by reflex action inducing bronchial spasm. If spasm can be produced, then why not paralysis? Was the paralysis in this instance, if it existed, produced by reflex action upon that portion of the respiratory centre of the brain controlling the posterior crico-arytenoid? If the paralysis was due to the infiltration of the muscular tissue, it could not have been overcome by the reflex action of the cold shock externally, for the effect was immediate and temporary. The stupor looked towards some brain disturbance, and this—whether from congestion, anæmia, or the circulation of depraved nutrient fluid—might have caused irritation of the brain centres for respiration. The amount of laryngeal obstruction due to the inflammation was, in my opinion, very slight. Possibly the paralysis might have been due to the inflammation causing direct irritation of the nerve. This was the view entertained by Dr. Cohen.

With regard to the action of the ice, I would earnestly call attention to it as a therapeutic measure, thus applied, as in all human judgment it saved the child's life. The child felt the beneficial effects of it at once, and, though somewhat unpleasantly shocked with it at first, rather desired it. It certainly appeared to re-establish the normal rhythm of respiration. I think the plan of placing the strips between large blocks an admirable one. I have not known of this having been suggested previously, and it occurred to me on the moment. In each instance, as the cloth touched the region of the ears the inspiratory effort followed. This may have been from reflex action of the facial from its posterior auricular branch, or from the action of the auricular branch of the pneumogastric in the external meatus; the laryngeal muscles being supplied by other branches of this great nerve.

PRESSURE FOR THE CURE OF HYDROCELE.

BY WM. R. D. BLACKWOOD, M.D.

PRESSURE applied in a variety of methods has for a long time been employed as a curative agent in diseases of the scrotum and its contents. This plan of treatment has been enthusiastically recommended in affections of the testicle, the afferent and efferent vessels, and in those of the coats forming the scrotum,—notably in the case of the tunica vaginalis. Experience has, however, led surgeons to adopt other devices, as being more readily managed, more reliable, quicker in action, and more stable in result. Many drawbacks prevent pressure from receiving that attention which it possibly deserves. As usually attained, compression of the scrotum is irregular and spasmodic in its action. As and when applied by the surgeon, it is probably equable, firm, and endurable, but in a short time after his departure the appliance (whatever its nature may be) usually becomes loose or uncomfortable, and therefore fails in attaining the essential object, —continuous pressure properly applied. This single defect has led to the almost total abandonment of the measure. In this as in many other problems, the trouble does not inherently belong to the thing itself, but lies in our inability to properly avail ourselves of its valuable qualities, to use it to advantage.

During the war, hydrocele, varicocele, and orchitis were of common occurrence, especially in the case of cavalry or the mounted officers of infantry,—the "horse-critters," as they were known to the people at large of the country through which we might be passing. From inability to readily retain applications whilst on the march, I usually confined the dressing by adhesive strips surrounding the scrotum, as in the ordinary strapping in swelled testicle, or by attaching them to the suprapubic and perineal regions. The loosening of plaster straps as already referred to becoming a nuisance, I early in the war discarded them in favor of the suspensory bag, holding it up by *elastic* webbing or bands (frequently made from suspenders, or

"gallusses," as the men termed them), the whole supported by a belt or strap around the loins, which, in addition, held up a perineal band, the object of which was to prevent the bag from slipping away from under the scrotum. Finding decided advantage to result from the elastic support thus afforded, I added pressure to the affected parts through strapping of the same material, and with marked benefit in the affections spoken of. Since the war, I have treated a number of cases of hydrocele in this manner, using strong elastic webbing formed into a bag, and in several instances a cure has resulted without operation. In all my cases which are operated on by tapping and the injection of Lugol's solution, I employ pressure at once by this method, to insure complete coaptation of the tunica vaginalis, that the cavity may be obliterated. Surgeons differ as to the necessity or advisability of securing adhesion of the tunica vaginalis to this extent, but I always desire it, am satisfied with my results, and see no indication for a change.

In the cases cured without an operation the pressure was maintained constantly for several months (four to ten); and I regard the case narrated by Dr. Baldwin in the *Times* of October 26 as unique, and the slight duration of pressure obtained by scrotal contraction through the action of cold salt water, an hour or so daily, for not over a month, would indicate the case to have been a mild one. I have found that where any patency of the inguinal canal existed, pressure failed in relieving the condition, the secretion passing into the cavity of the peritoneum, whence it was absorbed. It would thus appear that the tunica vaginalis must sustain pressure from within, and that to be effectual it must be firm and long-continued. I have repeatedly tried cold produced by ice or refrigerating mixtures, simple or medicated, but they invariably failed, as has strapping by adhesive or other plaster. The *elastic* and therefore comfortable pressure obtained as I have indicated is, I am sure, a valuable addition to our armament: it is easily applied, requires little supervision, and is inexpensive. Whilst the great majority of cases demand operation, no harm can result from a trial of such pressure, especially in the incipient stage. My attention having been called to this subject through Dr. Baldwin's article, I suggest this method of applying pressure, should such be desired. Although the use of elastic webbing for the bag and retaining-straps grew up with me during the vicissitudes of field-service which my division encountered in campaigns from the Atlantic to the Mississippi and back again, I do not claim any originality for it, as, although new to myself and the gentlemen of the medical staff associated with me at the time, with this as with many other plans in medicine, good, bad, and indifferent, "there is *nothing* new under the sun."

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TRAUMATIC TETANUS—BROMIDE OF POTASSIUM AND CHLORAL—CURE.

BY A. K. MINICH, M.D.

MRS. F., æt. 23, after paring a corn on outer surface of little toe until bleeding occurred, attended a ball, dancing until beyond midnight. The following day she complained of stiffness and shooting pains in legs and back. In the evening I was called, and found I had a case of tetanus. The jaws were locked, but yielded slightly when the handle of a large spoon was inserted between the teeth and turned. Speech was gone, opisthotonos well marked. I ordered the toe to be poulticed until thoroughly cleaned, after which morphia was sprinkled upon the wound. Thirty grains of chloral, at intervals of three hours, and fifteen grains of bromide of potassium, every hour and a half, were ordered. The next day she had improved. The chloral was dropped, and the bromide given every two hours, the following or third day every four hours, when, the symptoms having gone, she was placed under a tonic.

Remarks.—I report this case for two reasons: 1st, it is of interest to know from what slight causes tetanic symptoms may develop; 2d, the undoubted efficacy of bromide of potassium. The "corn-knife" should be more generally recommended. It consists of but one blade, with the cutting portion of the point convex,—an epitomized bowie,—so that the corn can be cut or shaved *out* without the risk of wounding the flesh, as is done so often with a straight-bladed knife. With the old knife, too, the operator on self sits in a crouched and twisted position, at once awkward and, I may say, undignified. This is obviated by the use of the corn-knife, which permits the operation to be accomplished not only safely, but gracefully.

NOTES OF HOSPITAL PRACTICE.

NEW YORK HOSPITAL.

CLINIC OF DR. L. DUNCAN BULKLEY.

Reported for the *Philadelphia Medical Times.*

CASE I.—ALOPECIA AREATA, ECZEMA, AND VITILIGO OCCURRING IN THE SAME INDIVIDUAL.

THROUGH the kindness of Dr. Fewsmith I am enabled to present to you in our first case a patient who is a perfect pathological treasure-house from a dermatological point of view, because he has a number of different skin-diseases associated together on his person. It is a useful case, for the reason that it gives me an opportunity of impressing upon you that you ought to be prepared to recognize not infrequently a number of different diseases of the skin as existing at the same time in the same individual. Because a patient has syphilis, for instance, it is no reason that he may not also be the subject of affections of the skin which are entirely independent of that; and when another one is troubled with eczema, perchance, we should not be surprised to discover that he has some other variety of skin-disease in addition.

In the present instance we find no less than four distinct affections.

The first and most striking of these is *alopecia areata.* On the right temporal region is a patch of baldness about an inch in diameter, as you notice, perfectly distinct and well marked, of a smooth and marble-like whiteness, and in the different plates which I now pass around you will see the disease well illustrated in its various degrees of severity.

The second is *canities.* Running from the patch of alopecia you will perceive a streak of clearly-defined and localized grayness of the hair.

The third is *eczema*, and this is found to be located back of the ear on the same side of the head on which the alopecia and canities occur. The patch is covered with little scales; and therefore the affection is to be classified as *eczema squamosum.*

The fourth is *vitiligo*, a skin-manifestation which is so rare that I may not have the opportunity of showing you another case of it during the whole of our course.

Now, three of these distinct affections are undoubtedly connected with each other, and are all of neurotic origin, viz., the alopecia, the canities, and the vitiligo. Alopecia areata is always to be classed as a neurosis, and, what is a remarkable feature of the disease, it usually occurs in a very sudden manner. In the present instance the patient woke up only a few mornings ago and found this bald spot where the hair had been as luxuriant as on any other part of the head the night before. Indeed, the recent origin of the patch of alopecia is here very evident to any one who is accustomed to see much of the affection. As to the canities, the patient is only thirty years of age, and we must also look to some nervous derangement for the explanation of this premature localized grayness. Such a streak of canities you will not infrequently see along the line of a neuralgia, so that a track of grayness thus sometimes becomes a useful guide for the localization of neuralgic trouble. Again, the leucoderma or vitiligo is a neurosis as well as the others. It is found most marked here on the backs of the hands, but it exists on other portions of the body also. If you will examine it carefully, you will observe that there are numerous patches of skin, irregular as regards size and shape, of a dead white; the appearance being due to an absorption of the pigment of the part which has followed upon a hyper-pigmentation in the same location.

The eczema, you observe, is red in color, as well as scaly; and it would require no little care in diagnosis to distinguish it from the psoriasis of the scalp which I showed you last week.

To return for a moment to the alopecia. I would call your attention particularly to the fact that the surface of the bald spot is perfectly smooth, and contains no stubbed hairs as in the case of tinea tonsurans or ringworm of the head. Usually there are no hairs at all; but if there are any present they are, as in this case, downy in character. That the affection is a neurosis is shown by the fact that it occurs in those whose nervous systems have become depreciated by too much smoking or from any other cause of such derangement or exhaustion. In the treatment, therefore, the improvement of the general health and tonics directed particularly to the nervous system form an important element. Locally, one word characterizes the treatment, and that is *stimulation.* Anything that stimulates the scalp will be of service; and for this purpose I know of nothing better than cantharides. In some instances it is even ad-

visable to blister the entire surface of the baldness, not for the sake of destroying any parasite (for in alopecia areata, you must always bear in mind, there is no parasite whatever), but merely for its stimulating effect upon the hair-follicles. Any further remarks in regard to the leucoderma I must defer until another occasion.

CASE II.—SERPIGINOUS, ULCERATING, TUBERCULAR SYPHILIDE.

This young man has on his left forearm near the elbow a large sore, to which I merely wish to call your attention for a moment in order that hereafter you may always be able to recognize similar ones at once. It is a typical case of serpiginous, ulcerating, tubercular syphiloderm, and the appearances are so perfectly characteristic that I do not care to ask a single question in regard to the history. The lesion here present is all-sufficient. The essential characters of it are the ulcerating, crust-covered edges of this somewhat circular patch of about two inches diameter, which, as you observe, can clearly be seen to be composed of separate tubercular masses. The centre is cleared, with a rather superficial scar. Such a syphilide as this is one of the later manifestations of the disease, occurring along towards the tertiary period, and may be met with at any time between the second and eighth year after infection. For its successful treatment the iodide of potassium alone is not sufficient: it requires the continued use of mercury also.

CASES III. AND IV.—LUPUS VULGARIS.

The two women whom I now show you are suffering from *lupus vulgaris*, which, you must clearly understand, has no connection with syphilis whatever. The first case is a very marked and inveterate one, the patient being now 45 years of age, and when she speaks you observe that her voice is reduced to a whisper. This is because the larynx has become affected by the disorder; and it is the case which Dr. Lefferts described in a late number of the *American Journal of the Medical Sciences*, under the heading "Lupus of the Larynx." The disease commenced over thirty years ago, in a small patch upon the nose, and gradually extended until it has involved the entire face and resulted in causing the revolting aspect which the patient now presents. During these years every conceivable treatment has been tried in her case, such as that by calomel, arsenic, etc. She has been bled sixty-four times, has made use of iodine locally for years, and, in short, has tried every method and therapeutical agent that has ever been recommended by anybody. For some time past she has been taking phosphorus internally under my direction, and, it would seem, with more or less benefit. Certainly the disease appears to be checked, and the elements of it of a less succulent character than formerly.

You see how very extensive the disease is in this case, reaching from behind one ear to behind the other, and from down on the neck below the chin up into the scalp beyond the forehead; notice, also, the marked and characteristic contractions from ulceration and loss of tissue (notably about the alæ of the nose) which it has produced. The initial and any subsequent new manifestation is always in the form of separate tubercles, and it is to the border of the affected area that we must look for the elementary lesion whenever a case presents itself. The characteristic points about these tubercles are that they are distinct from each other, of a purplish red, not much elevated above the surface, and they are pulpy to the touch, feeling very much like putty would under a membrane, much softer than the masses in syphilis or epithelioma. Here, you notice, is a large mass of such tubercles near the right ear; and if we were to examine their structure under the microscope we should find that it consisted of a small-celled growth occupying the whole thickness of the skin. This cell-infiltration really takes the place of natural elements of the latter, and hence it is that there is always marked cicatrization when healing takes place. The scales on the surface of superficial lupus vulgaris are very peculiar, and are shown very characteristically in this case. You see they are not abundant, but a large share of the surface is covered with thin, pellicular scales, attached quite firmly at one edge, or, rather, which are free only at one edge and attached over most of their surface.

In lupus the affected tissue is very soft and breaks down very easily; and this is the reason why Hebra's famous treatment has been so successful in a large number of instances. His method is to bore thoroughly in every direction into the lupous masses with a stick of nitrate of silver, and in this way the disease can be thoroughly

eradicated when it is confined to small areas. There is no danger of doing injury to the healthy tissues, because the nitrate of silver cannot possibly penetrate them with its comparatively dull point. I have frequently resorted to this plan with great success, making use of Squibb's stick nitrate of silver, and sometimes grubbing and digging with it, as it were, over the whole surface, in order to thoroughly break down and destroy all the soft lupous material. This is, of course, an extremely painful operation, and it is necessary to etherize the patient first, as well as to administer morphia for a short time after it. Besides the nitrate of silver boring, Hebra is in the habit of employing this instrument which I hold in my hand, which he calls a spoon-gouge, for the purpose of clearing away the diseased tissue.

Again, we have Volkmann's and Squire's methods of multiple puncture or scarifications with the knife at our command, and when I was in Paris during the past summer I saw this practised with the most wonderful results. The knife used is one made expressly for the purpose, and with it the lupous area is cut through in different directions, thus giving rise to an inflammatory process which results in healthy cicatrization.

Without alluding to the various other plans which have been tried in the treatment of lupus, I will only recur for a moment to that by phosphorus. For some time past this patient has been on the use of Ashburton Thompson's solution of phosphorus, and has, I believe, received considerable benefit from it. This, you must remember, is an exceedingly bad case, and, in view of the previous steady progression of the disease in spite of all measures adopted for its relief, we ought to feel grateful for any improvement whatever. One evidence of improvement is the present smoothness of all the surface of the cheek, which formerly felt rough and nodulated to the touch.

The other patient with lupus is a female, forty-two years old, in whom the disease has lasted but nine months as yet. Here, you perceive, it is located upon the right cheek, and is of a very superficial form; but here you perceive the same purplish, pulpy tubercles as around the margin in the preceding case. It is not, however, lupus erythematosus, of which I showed you an example last week, although that also is quite superficial, and does not result in drawing of the face, such as was seen in the first case. This patient has also been taking Ashburton Thompson's solution (the dose used being twenty drops three times a day), and the disease is now much less marked than it was before she commenced its use. In case it shows any tendency to spread in the future, I should promptly resort to scooping out the affected tissue, in addition to the internal use of phosphorus.

CASE V.—PSORIASIS.

Next I will ask you to look for a moment at this boy, suffering from general psoriasis, whom I showed you a week ago. It is a very marked case, the whole body being covered with the eruption. It is, as you remember, a perfectly distinct affection from chronic eczema, which some portions of it resemble greatly, and particularly in this, that here and there over the surface are to be found the round, red spots, with white, micaceous scales upon them. Here on the arms the eruption resembles that shown in the colored plates, but on the body the disease involves all the surfaces, as also on the scalp, and viewing these regions alone it would be difficult to distinguish between scaly eczema and psoriasis.

The books say very little about such treatment of psoriasis as I am in the habit of employing; but, as I have been led to regard the disease as a constitutional affection, analogous in some respects to gout, I depend almost altogether upon internal medication and very strict attention to the diet. This patient has been taking fifteen grains of acetate of potassa in a bitter infusion three times a day, after meals, and already begins to show signs of improvement.

CASE VI.—TUBERCULAR SYPHILIDE OF LEG.

This woman has also been presented to you before, and I only introduce her again to-day to show the results of two weeks' treatment, and for the purpose of exhibiting the case to those who were absent on the former occasion, and also that those of you who saw it before may have the appearances here present fixed in your minds in such a way that you may never forget them. This affection of the leg you should be able to recognize as syphilitic without asking a single question;

and in this connection some of you will, perhaps, recall Hebra's advice, never to listen to patients' accounts of themselves, because they always lie. Here is an ulceration which is perfectly characteristic of the tubercular syphilide, and it ought never to be mistaken for anything else. A large share of the surface of the right leg is covered with an ulcerating lesion, which is seen to be composed of separate masses of infiltration, grouped together. The edges of each ulceration are sharply defined, but are not hard and everted, as in varicose ulceration; moreover, in the latter you never see so many small ulcerations, and seldom will you find them extending so high up on the leg. Also here on the knee are cicatrices of a former eruption of a similar character, also on the chin. The leg was very painful two weeks ago, and the odor from it very fetid. The patient has been just two weeks on the "mixed treatment," and even thus early has been greatly improved. No local treatment whatever has been employed.

(To be continued.)

TRANSLATIONS.

ENEMATA OF CHLORAL IN SICK HEADACHE.—Dr. J. Seure (*Bull. Gén. de Thérap.*, 1878, p. 365) recommends this treatment very highly. He says that a patient of his, a lady, who is subject to severe attacks of migraine after shopping, etc., is accustomed, on her return home, to take an enema consisting of a glass of warm water, with a tablespoonful of the following mixture: ℞ chloral, gr. xlv; aq. destillat., ʒx.—M. She then reclines upon a sofa, with closed eyes. Within a few *seconds* she begins to taste the chloral in her mouth, and at the same time she experiences a sensation of numbness. Little by little the headache disappears, nausea is allayed, and half an hour later nothing remains but a slight discomfort in the head, with a little torpor.

Within an hour and a half this lady finds herself able to sit down to dinner, and by the time the meal is over she has forgotten all about her headache and is able to entertain visitors during the evening. In this case twenty grains of the chloral are enough, but in the case of men thirty to forty grains are required. Dr. Seure has noticed that the relief gained is more prompt if a tablespoonful of brandy or whisky is added to the enema. The enema has one disadvantage; that is, the slight burning pain which it causes in the rectum. This may be avoided by the use of a glass of warm milk instead of water, or better by beating up the yolk of an egg in the water. In the case of individuals who retain enemata only with difficulty, a smaller amount may be injected, and a drop or two of laudanum may be added. Dr. Seure regards this treatment as almost infallible for the arrest of an attack of sick headache, and as decidedly preferable to the administration of remedies by the mouth. It has the advantage of not disturbing the stomach. Chloral also acts very promptly, its absorption by the rectum being almost instantaneous, as is proved by the effects on the general system, and also by the exhalation of chloroform by the lungs within a few seconds after the enema has been taken. X.

ANATOMY OF THE SYPHILITIC PAPULE.—At a recent meeting of the Société de Biologie (*Le Mouvement Méd.*, 1878, October 19) M. V. Cornil read a paper on this subject, giving the results of microscopic sections of these lesions. The fragments examined were taken from the cadaver. According to Cornil, the skin in the neighborhood of the papules is slightly raised. Sometimes the epidermis is thickened, at other times it has desquamated and the upper layers of cells are wanting. The rete is slightly thinned. The vessels are gorged with blood. The connective tissue of the papillary layer is normal. Around the capillary vessels, however, the "lymphatic cellules" are observed in considerable number in the peripheric connective tissue. In the deeper layers of connective tissue, around the tubes and lobules of the sudoriparous glands and the vessels of the dermis, all the vessels are surrounded by a zone of greater or less width, composed of "lymphatic cellules" which have escaped from the vessels and have accumulated along their course, pushing out the fasciculi of connective tissue. Islands of cellules are also observed around the vessels. The fasciculi of connective tissue have not been invaded by the "lymphatic cellules." The diapedesis and migrations of white corpuscles have therefore been very limited, circumscribed, in fact, about the blood-vessels. The pathological modification here has evidently been very slight;

it has not involved the "fixed cellules" of the connective tissue; it has not modified the appearance of the fasciculi of connective tissue, and it has only permitted the diapedesis and escape of the white corpuscles in the immediate neighborhood of the vessels. Though not severe, however, this pathological condition penetrated deeply, even to the panniculus adiposus. The ecchymotic or pigmentary color of the papules in process of cure is due to the fact that certain red globules have escaped from the vessels at the same time as the white ones. The coloring-matter of these red globules impregnates the tissue of the papillæ and gives the dusky hue to the eruption. Gradually this coloring-matter is passed on to the rete, where it gives the pigmentation to the lesion. This pigmentation lasts until the granules of coloring-matter are gradually brought to the surface and eliminated. In the larger papules there is something more than a simple inflammation of the papillæ and the superficial layers of the corium; all the dermis, and together with it the subcutaneous cellular and adipose tissue, is inflamed in the same manner. In the dermis, in fact, the fibrillæ of the connective tissue are separated by round cells ranged in series, or by fixed, tumefied cells; more deeply the adipose cells of the subcutaneous cellular tissue are inflamed, each adipose vesicle is surrounded by a circular arrangement of lymphatic cellules, and the fat is resorbed; the islands of fat-globules are transformed into islands of embryonic connective tissue where the fat has disappeared. In most of the preparations of the cutaneous papules some are seen which tend to separate from the mucous layer. In some sections a clear space exists between the summit of the papillæ and the vault or cover formed by the mucous layer. During life these spaces are filled with blood, forming a sort of ecchymosis and giving the coppery color to the eruption. These sanguineous effusions are a manifestation of the deglobulization of the blood in syphilis which permits its passage through the enlarged capillaries already modified in their walls by the inflammatory process. X.

Acute Carbolic Acid Poisoning—Recovery.—Oberst (*Cbl. f. Chir.*; from *Berlin. Klin. Wochens.*, 1878, No. 12) was called to see a man who three minutes previously had swallowed five ounces of a five per cent. watery solution of carbolic acid. The patient was unconscious; a cold sweat over the face; the jaw tightly clenched. Oberst opened the œsophagus, passed the stomach-sound without difficulty, and emptied the stomach of some four ounces of its contents, which smelled strongly of carbolic acid. Several pints of water were then introduced, the stomach washed out, and the patient rapidly recovered. The urine was colored brown for one day, while a catarrh of the bladder from which the patient had suffered improved greatly under the influence of the carbolic acid. (Here is a hint for the treatment of vesical catarrh which deserves to be followed out.—Trans.) X.

Carbolic Acid in the Treatment of Whooping-Cough.—Dr. Ed. Thorner (*Deutsches Archiv f. Klin. Med.*, Bd. 22, 1878, p. 314) counsels the employment of a one to two per cent. solution of carbolic acid in the form of vapor. It may be used in an ordinary inhalation apparatus, or in cases of young children a larger quantity may be atomized in a closed room several times a day and the little patient permitted to breathe the atmosphere. X.

Counting the Milk-Corpuscles in the Analysis of Human Milk.—E. Bouchut (*Annales de Gynécologie*, 1877, p. 453; from *Cbl. f. Med.*, 1878, p. 572) estimates, on the basis of the examination of 158 nurses, the numbers of "milk-cells" at 200,000 to 5,000,000. Cow's milk contains 1,102,000 per cubic millimetre, with a specific gravity of 1022 and 24 grammes of butter per 1000 grammes. When the proportion is 3,700,000 "milk-cells" the specific gravity is 1030, the proportion of butter 34 grammes. X.

Dermoid Cyst in the Floor of the Mouth.—Guetterbock (*Cbl. f. Chir.*, No. 43, 1878; from *Arch. f. Klin. Chir.*) reports the case of a man 26 years of age, in whom a tumor of the floor of the mouth had grown for a year, until it hindered speaking, chewing, swallowing, and even breathing.

The tumor, which was the size of a hen's egg, fluctuated decidedly and was sharply defined. It was at first taken for a ranula, and an incision was made into it without result. It was then removed from the mouth without the patient having inhaled ether. The tumor was found to include a broth-like contents, together with a number of crumpled hairs, and was in fact a regular dermoid cyst. X.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JANUARY 4, 1879.

EDITORIAL.

A GREAT NEED SUPPLIED.

A MOST important new journalistic enterprise, just announced by Leypoldt, of New York, is the *Index Medicus*.

"This journal will record the titles of all new publications in medicine, surgery, and the collateral branches received during the preceding month. These will be classed under subject-headings, and will be followed by the titles of valuable original articles upon the same subject, found, during the like period, in medical journals and transactions of medical societies. The periodicals thus indexed will comprise all current medical journals and transactions of value so far as they can be obtained. At the close of each yearly volume a double index of authors and subjects will be added, forming a complete bibliography of medicine for the preceding year. It is not at present intended to index journals devoted to the subjects of chemistry, pharmacy, veterinary medicine, and dentistry, but the editors will select from them articles which have a bearing upon pathology or therapeutics. In the description of new books *received*, the size, price, illustrations, place of publication, and publisher's name will be accurately given."

Of course the value of such a journal as the *Index Medicus* depends upon the facilities and the abilities at the command of its editors. When we say that Dr. Billings is to be in charge, and his Washington assistant, Dr. Fletcher, is to be assistant editor, that the trained cataloguers with the exchanges and journals of the National Medical Library are to furnish the material, we say enough to show that the *Index Medicus* will be a necessity to every specialist, to every author, to every teacher, and to every thorough student of the profession. All of the medical journals of the world, with perhaps two or three out-of-the-way exceptions, are to be so indexed that the index rerum will disappear from the medical professor's or student's table, and, instead of each man working by the rush-light whose strands have been gathered laboriously by himself, there will be the one central electric globe which shall thoroughly illuminate the darkest recesses of current medical literature.

Again, if Congress ever publishes the subject-catalogue of the National Library, the forthcoming journal will be its perpetual supplement, and whoever employs one as a guide to the past will never do without the other as a leader for the present.

WE do not know that ever in the history of this journal have we felt called upon to say a word of criticism concerning any foreign medical or scientific appointment. There are but few men and but few positions whose labors or history has broadened their possession until they belong not to one country but to the world. Under the direction of Burdon-Sanderson, the Brown Institute for Animals in London has rapidly achieved such universal reputation, and has come to be looked upon as one of the very few places in Anglo-Saxon lands where medical scientific work, other than clinical, is steadily produced in quantity and quality alike most excellent.

In this institution, appointments are made by the Senate of the London University, and, Burdon-Sanderson having resigned, they have selected, not Dr. Klein, his former assistant, whose multiplied labors we all know, but Dr. Greenfield, of whom few of us have ever before heard. By natural succession, by distinguished reputation, by devotion to pathological research, and by acknowledged ability, Dr. Klein was entitled to the appointment, whilst as an active practitioner and hospital physician Dr. Greenfield may have deserved and acquired local reputation and practice, but nothing more.

No wonder the *British Medical Journal* reproaches the Senate of the London University for their stupidity or favoritism, and predicts the sinking of the Brown Institute into insignificance. Certainly the grave seigniors have done a fourfold injury to medical science, in discouraging scientific work everywhere by making the younger physicians feel that the most faithful and the ablest of scientific research will not insure a good scientific appointment, in injuring the institution under their care, in injuring and perhaps extinguishing one first-class scientific worker, and in curtailing the progress of medical science in England.

CORRESPONDENCE.

LONDON LETTER.

WE are in the midst of an old-fashioned English winter, and realizing the effects of cold upon the organism generally, and upon the air-passages in particular. Even in London the streets are white and the railings rhimy. It is rarely that we see anything like hoar-frost here for several mornings consecutively; but Jack Frost has got a grip upon us this time that just indicates what his grip can be. Consequently, we see an immense amount of bronchitis in all its forms. Acute bronchitis in babies, who generally offer little resistance to this infant-destroyer. Poor little things! It moves one's compassion to see them plaintively wailing in charge of a mite of an older sister, a very few inches taller and not so very many pounds heavier than themselves; or hanging over the side of a perambulator, while their custodian is deeply interested in the barter of some sweets and utterly forgetful of their comfort or discomfort. The use of the turbinated bones, and the question of residual air in the lungs, are subjects of which they are as ignorant as an old English peasant was of why the window-tax was substituted for hearth-money, all unconscious of the industrious historian who was not yet in embryo, but who, when he did come, let everybody know all about it. The genesis of bronchitis is now a simple study. These unfortunate children, crying and moaning, breathe almost exclusively through their mouths, and so do not benefit by the arrangements in their noses for warming the inspired air when it takes its normal and proper course. What betwixt the swollen nasal membrane limiting the calibre of the nasal air-passages, and the ready entrance offered by the open mouth, the poor little bodies are industriously courting death. Nor are their efforts unsuccessful. Myriads of them will never see Candlemas day, especially in the cotton, coal, and iron districts, where the operatives in thousands are lying idle. After the prosperous years of high wages, over-hours, and over-production, they are meeting with reverses which entail terrible suffering; and, as if the unavoidable misery were not enough for them, they have been striking, in the face of falling markets and short hours. The drop of warm milk, sweetened with treacle, which might maintain a flagging heart and a failing respiration, can no longer be procured by famishing parents, and the fire is out on the hearths of thousands of homes where, until very recently, the sounds of the piano and the harmonicon were regularly heard. Want in winter is indeed a terrible thing, and our hospitals are full, very inconveniently full, all of them. But for these perishing babes there are no hospitals, and, alas, no comforts. The tiny structure, begotten of physically weak parents, scarcely suckled, but fed on tea and pap, readily succumbs to the onslaught of bronchitis. It is a stern thing, this weeding out of the imperfect organisms, this slaughter of the innocents, that the race may profit, and a grim lesson that is being taught by cold and disease.

But by this time the reader will be wondering what has become of the original subject and the residual air. Even after the fullest expiration a certain amount of air remains within the thorax at or near the temperature of the body. When air is respired through the nostrils it is heated by the warm plates of the turbinated bones, with their rich vascular supply over them in their mucous membrane. But these poor children crying and moaning breathe almost exclusively by the mouth, and but little by the nostrils, which are more or less plugged with mucus, that the little custodians are not watchful in removing. Consequently they inspire the cold air, and the residual air in the lungs becomes persistently chilled, and then hyperæmia of the bronchial lining membrane follows, and runs on into inflammation. The struggle for life is very brief with these ill-nourished infants; the respiratory centre cannot carry on a long fight, the bronchiæ become choked with phlegm, which the organism is unequal to removing, and then the life flickers out. It is, unfortunately, quite impossible to see how such disease is to be prevented, at least in the present state of our knowledge. As to treatment, it must be as energetic as circumstances will permit; and I am inclined to think that the effects of temperature on the centres of the circulation and the respiration are not sufficiently attended to. The effect of a low temperature is to lessen the activity of these two centres; while heat stimulates them. Consequently, when the body-temperature falls, these centres

are partially paralyzed, and the advantage to be derived from hot drinks and the jacket poultice are obvious. They greatly aid the action of direct stimulants to those centres, as ammonia, strychnia, belladonna, etc. The efficacy of these means was well illustrated in a case where the writer was called in consultation lately. A lady, who was liable to attacks of asthma, was severely ill with bronchitis. Her pulse was 150, and respirations 40 per minute. The respiratory act being labored, the face was dusky, the temperature 102°, though the perspiration was profuse. The only scintilla of hope lay in the fact that the right ventricle might have been trained by the attacks of asthma to stand a long strain. Ammonia and strychnia with spirits of chloroform were given, whisky with milk ordered freely, and the chest was encased in linseed meal poultices. She rallied, and made an excellent if scarcely hoped-for recovery.

It is perhaps desirable to follow the maladies associated with the season, as their frequency then gives their discussion more interest for the reader. Assuming the reader's concurrence in this view, it may not be out of place to review the effects—or some of them—of cold upon the elderly, and especially its effects upon their vascular system. In hot weather the cutaneous vessels are dilated, the surface is warm, the sudoriparous glands are active, and the cooling effect of the evaporation of the perspiration is added to the heat-loss from the dilated vessels. On the other hand, in cold weather the skin is dry, perspiration is excited with difficulty: it is also cold, white, and bloodless. The blood is now driven away from the external, or heat-losing area of Rosenthal, to the interior, or heat-producing area. The heat-loss is thus economized, while its production is increased. By such arrangements is the body-heat regulated in hot and cold external temperatures. These beautiful adjustments, however, are not entirely without risks and dangers of their own. The vascular system is taxed sometimes to make the adjustments; and especially is this the case with those persons who have entered upon the vascular changes associated with chronic renal disease or gout. Here there are hypertrophy of the muscular wall of the peripheral arterioles, a high arterial tension, and a hypertrophied left ventricle. The effect of cold is to contract the cutaneous arterioles, which, in their entirety, contain a large mass of blood; and not only that, but the more internal arteries of the limbs feel the effect, and the hands become blanched, bloodless, and deadly cold, from the spasm in the smaller arteries. Such spasm raises the blood-pressure in the arteries, and from this spring several pathological sequences. The heart may become embarrassed, or the arteries may suffer.

When cold weather comes on quickly, the newspapers contain accounts of a number of sudden deaths, especially in people advanced in years. Heart-failure and apoplexy are the causes of sudden death, while respiratory diseases do not usually kill in less than two or three days, unless it be pulmonary congestion or apoplexy, which Rokitansky held was a common cause of rapid death. Heart-troubles manifest themselves in the form of angina pectoris and heart-failure in diastole. The sudden rise of blood-pressure offers an obstruction to the onward flow of the blood, and then one of two things follows: the heart contracts more vigorously,—even palpitating in its efforts to force forward the blood,—or it is unequal to doing so, and becomes acutely distended. Sudden distention of the heart is a not uncommon cause of death occurring suddenly. Here the heart-muscle is paralyzed by the distention, and is found, at the autopsy, flaccid in diastole. This serious result is most common in those who are the subjects of degeneration of the heart-walls. So long as the muscular tissue is in its integrity the heart-walls struggle away, palpitation and irregularity testifying to the strain put upon them; but when their structural integrity is impaired, and especially when their nutrition is interfered with by atheroma of the coronary vessels, then any acute taxation is badly borne. The history of the deaths from angina pectoris is very instructive. In all—even in Arnold of Rugby, who died in his first attack—there are evidences of disease of the muscular walls. In the case of John Hunter, the great anatomist, there was a history of anginal attacks for twenty years preceding his death; and when at last the final attack came, it was found that the coronary arteries were converted into bony canals. Nothnägel tells of a case of angina pectoris brought on by travel in a post-wagon in very cold weather, and adds the term vaso-motor to this form of angina. When, then, there is a structural degeneration either in the heart-walls or in the arterial tunics, the rise of blood-pressure in the arteries becomes a grave source of danger. If the heart still remains powerful, the risk of arterial rupture is greatly increased. Where the heart is undergoing decay, and so is weakened, the risk of apoplexy is lessened, but that of heart-failure is proportionately increased. Even invalids confined to their rooms feel the changes of external temperature, in their vascular system if not consciously, and are not safe from the baneful effects thereof. The great importance of warm clothing for the aged, and especially those whose kidneys and vascular system are involved in general degenerative changes, cannot be overestimated, and the most scrupulous attention to this matter is desirable on the part of their medical attendants.

As if it were not enough to provide us with incessant changes from snow to thaw, the thermometer never rising many degrees above the freezing-point, we have been favored with persisting fogs. The sun has been visible,

faintly glimmering at us, twice the last fortnight, but, apparently seeing no encouragement, has veiled himself again, after the momentary peep. We have realized lately that this is a land of fogs and mist, and strangers tarrying with us must have had vivid impressions of the weather, and ceased to wonder why it is such a steady theme and conversation-topic with the Britisher. What with the weather, the state of trade, the eccentricities of the present government, dominated by a being of Oriental descent, and the general depression, it is eminently creditable to us that the number of suicides is not materially increased.

The question of the effects of spasmodic contraction of the arteries and arterioles of the extremities, especially in connection with cold weather, presents itself in an interesting aspect in relation to *sleeplessness*. It is now widely known that a condition of cerebral anæmia is essential to sleep, and that if the arterial vascularity of the brain is kept up sleep is out of the question. If, then, the extremities be cold, sleep cannot be successfully wooed. An old theological writer, when weary with long writing, kept sleep at bay by immersing his feet in cold water: by so driving the blood to the head he could continue his labors: whether they were worth much after such expedients may be open to question. With many women cold feet are their bane; they are miserable when awake, and they can scarcely get to sleep. If they can get their feet warm, then they can sleep, but not otherwise. But how to get their feet warm is the question with them. Hot bottles to their feet are but partially effective, and often are a complete failure. Now, Dr. George Johnson has pointed out that with the dry imperspirable skin of certain persons with chronic Bright's disease, perspiration cannot be induced by warm baths. But if the person be first wrapped in a cold pack, so as to drive the cutaneous arterioles into spasmodic contraction, subsequent paralysis readily follows on the patient being placed in a warm bath; the vessels become thoroughly dilated, and then perspiration follows. The spasmodic contraction is essential and necessary to the consequential dilatation; and the same holds good of the cold feet of women. Tight boots prevent the free flow of arterial blood through the feet during the day, and the subsequent dilatation which follows with some persons does not occur with others. Indeed, it would seem that the anæmia caused by the pressure remains, and the feet are stone cold. Putting them to the fire gives temporary warmth, and so does the hot bottle in bed, so long as it remains itself hot; but as it cools the feet again become cold, and sleep cannot be wooed successfully.

What should be done is to dip the feet momentarily into cold water and then have them well rubbed with hair gloves or a rough towel until they glow. This seems a very unattractive plan to many minds; but it is just the story of the snowballer's hands. At first the contact of the snow makes the fingers very cold; but perseverance is rewarded by a glow which may become almost a burning heat; the primary contraction of the vessels is followed by secondary dilatation. This is what we will accomplish by the immersion, for a brief period only, of the feet in the cold water, followed by friction. By such means the cold feet become warm, and after this a hot bottle to the feet will keep them warm effectually. With my patients at the hospital the complaint of bad nights now evokes the question, "Are your feet cold?" And the answer very commonly is, "Oh, dreadful!" And it will be found that all narcotics, draughts, pills, or lozenges are futile to procure sleep as long as the condition of the feet is not attended to. Subject the feet to appropriate treatment, and then the sleeping-draught will be successful and attain the end for which it is administered. Macnish said of sleep, "Sleep which shuns the light embraces darkness, and they lie down together most lovingly under the sceptre of midnight." Very true; but cold feet will upset the whole arrangement very thoroughly.

J. MILNER FOTHERGILL.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, OCTOBER 24, 1878.

THE PRESIDENT, DR. H. LENOX HODGE, in the chair.

(Continued from page 141.)

Kidney from a case of phthisis, showing dilatation of the pelvis and calyxes, and supposed secondary tubercular deposits. Presented by Dr. LOUIS STARR.

C. S., æt. 29, a sailor, died in my ward at the Episcopal Hospital, on October 12, from catarrhal phthisis. Several months before coming under my care he had suffered with cystitis, for which disease he had been treated in the surgical ward of the hospital.

When admitted to the medical ward he presented all the ordinary rational symptoms and physical signs of advanced phthisis. His urine was examined, though there were no symptoms directing attention particularly to the kidneys or bladder, and found to be of low specific gravity, 1012, and to contain a small amount of albumen. The autopsy was made nine hours after death. On opening the thoracic cavity the lungs were found to be bound to the chest-walls by numerous pleuritic adhesions. The upper lobes of both lungs contained large cavities, while the remainder

of the pulmonary tissue was infiltrated with caseous material. The heart was normal in size, its muscular tissue was pale and somewhat flaccid, and one leaflet of each of the semilunar valves was fenestrated. The liver was large and fatty. The kidneys were quite different in appearance. The left was slightly enlarged, and presented the gross characteristics of the "large white kidney." The right was also larger than normal, and had a lobulated appearance externally; on section this lobulation was found to be due to saccular dilatation of the pelvis and calyxes, the various sacs being filled with a turbid, urinous fluid, and having thick walls. The largest sac, nearly an inch in diameter, was situated in the lower part of the kidney, and approached very near the external surface, leaving only a thin layer of condensed leather-like renal tissue. The glandular structure of the rest of the kidney was not reduced in thickness, but was much firmer than normal, felt rough to the finger, and was studded with little nodules, which to the unaided eye appeared to be collections of miliary tubercles. In removing the kidney the ureter was torn off a short distance from the organ; the tube in this position was moderately dilated, and its wall was thickened and friable. The mucous membrane of the bladder was thickened and rough and was covered with tenacious mucus; on the peritoneal surface a large number of small nodules, about as large as split peas, were observed. Similar nodules were also found on the intestinal peritoneum.

Report of the Committee on Morbid Growths.—"A microscopical examination of a section of the kidney presented by Dr. Starr shows the glandular part of the organ to be very much altered; the tubules are to a great extent deprived of their cells, and surrounded by fibrillar connective tissue in a state of proliferation. The capsules of the Malpighian bodies present a similar arrangement of structure. The miliary nodules scattered throughout the organ consist of a central granular mass, the periphery of lymphoid cells, in a stroma of delicate, reticulated fibrous tissue. The organ exhibits the lesion of acute tuberculosis.

"The new formations situated in the peritoneum covering the bladder are composed of elements similar to those found in the nodules of the kidney, and have a like arrangement.

"November 14, 1878."

Gelatinous arthritis of knee. Presented by Dr. H. LENOX HODGE for Dr. JOHN ASHHURST, Jr.

The specimen presented is the lower extremity of the femur, articulating surface of the tibia, and patella, from a patient whose thigh had been amputated the day before by Dr. John Ashhurst, Jr., at the Children's Hospital. The case was one of arthritis in a child of ten years, the subject of hereditary syphilis, who had been under treatment in the hospital for more than eighteen months. The first incision had been made as if for excision of the knee, but, the bone disease having been found too extensive to justify this operation, anterior and posterior flaps were cut, and the thigh amputated at its lower third. The specimen showed very well the characteristic gelatiniform change in the synovial and cartilaginous tissues, while the bone was markedly carious.

November 20.—The flaps united by adhesion, and in ten days, the ligature having come away, the patient was looked upon as convalescent. Uninterrupted recovery followed the operation.

Primary cancer of the intra-thoracic glands. By Dr. WILLIAM PEPPER.

The patient, a blacksmith, æt. 40, was admitted to the Philadelphia Hospital suffering with large pleural effusion on left side, extreme dyspnœa, husky whispering voice, and slight dysphagia. The history was obscure. It appeared that for two years there had been occasional dysphagia and increasing huskiness of voice. For past three months there had been increasing dyspnœa. On careful examination, the physical signs of pressure on right bronchus were detected, and some hard and enlarged lymphatic glands were found in left supraclavicular space.

The diagnosis was made of primary cancer of intra-thoracic glands, pressing on right bronchus, œsophagus, trachea, and azygos vein. Death occurred suddenly from syncope.

The autopsy revealed cancerous disease of the glands in both anterior and posterior mediastinum, forming masses of considerable size. The right bronchus was compressed. The œsophagus and descending thoracic aorta were partly imbedded in the cancerous growth. The azygos and hemiazygos veins were involved, and so imbedded that it was impossible to dissect them out. Large pleural effusion existed in the left side.

Report of the Committee on Morbid Growths.—"The specimen of intra-thoracic new formation presented by Dr. Pepper, and referred to the Committee on Morbid Growths, is found, by microscopic examination, to consist of a fibrous tissue stroma arranged so as to form alveolar spaces, in which spaces are seen epithelial cells. This arrangement of structure is characteristic of carcinoma—variety scirrhus. The enlarged glands from the neck have undergone a similar metamorphosis, as shown by microscopic examination.

"November 14, 1878."

PROFESSOR GORUP-BESANEZ died in Erlangen on November 24, in his sixty-third year. He was well known as the author of a large manual of Physiological Chemistry and of other writings on the same subject.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting was held at the hall of the College of Physicians, Philadelphia, November 27, 1878, Dr. J. Solis Cohen, Vice-President of the Society, in the chair.

The question of tracheotomy for laryngeal paralysis.—Relief of asphyxia by ice.

Dr. M. O'Hara made some remarks upon a case in which the necessity for tracheotomy was averted by the systematic application of intense cold, in a child suffering with acute laryngitis. (See page 150.)

Dr. R. A. Cleemann referred to a case of capillary bronchitis in which anæsthesia of the nerve-centres was set up by the retention of carbonic acid in the blood, on account of the difficulty in getting air into the lung. The case was given up by the physician in charge, but the application of ice to the skin stimulated respiration, produced better aeration of the blood, and the child recovered.

Dr. O'Hara said that the urgency of the symptoms must be taken into consideration as one of the indications for tracheotomy. Although in the case reported the suprasternal and infra-thoracic soft tissues sank in with each effort at inspiration, showing impediment, there was no obstruction to expiration, and the blood received a fair quantity of oxygen, there were none of the signs of suffocation such as we see in capillary bronchitis, and there was no time when the blood was so deficient in oxygen as to require an operation. One of the great difficulties in regard to tracheotomy is the need of exact indications for the time of its performance; and the case was reported as a contribution to this subject.

Dr. Nancrede agreed with the lecturer, and stated that where the difficulty in breathing only comes on at intervals and in paroxysms, tracheotomy is not indicated; but where there is manifestly less air rushing into the chest, and the obstacle to its ingress becomes permanent, if the state of the child otherwise warranted the operation, he thought that such cases are just the ones for tracheotomy, which should not be deferred until the child is exhausted.

Dr. W. R. D. Blackwood said that the subject of tracheotomy is always one of great interest, but probably there is no other operation in surgery about which more diverse views of its utility have been expressed. One explanation of such a doubt may be found in the fact, as suggested by Dr. Nancrede, that it is generally performed too late. He had had two cases of tracheotomy in this city, and had assisted in several others. The importance of early operation is not sufficiently dwelt upon, and it should be brought more prominently before the profession. Physicians are inclined to wait until all other resources have been tried and failed. In his first case, one of membranous croup, he had fully determined to operate as soon as symptoms of suffocation came on, but the family then objected, because the child looked so well: when he got manifestly worse they consented, but it was too late. He was satisfied that if performed earlier it would have been successful; the child lived only a few minutes after the operation. The second case recovered after tracheotomy.

The application of cold in this connection is new, but the fact of its stimulating power in other cases is well known. In chloroform-narcosis, a piece of ice in the rectum will produce inspiration after breathing has stopped, and ice in the vagina will produce reflex contractions of the uterus.

Probably the case reported would have recovered under other treatment as well. There could not have been a closure of the glottis; for in that event, if there was no room for it, no amount of stimulation would have allowed the air to get past. If the trachea were closed, the application of the cold would have done but little good.

Dr. O'Hara believed the trouble to be due to paralysis of the muscles that dilate the glottis. The application of cold overcame this, just as water thrown on the face of a new-born child causes deep inspiration.

Dr. Nancrede said that if there were actual paralysis of the glottis, strong inspirations would increase the dyspnœa, by sucking in the valve-like cords, while gentle breathing would not disturb them. On the other hand, complete paralysis would not be relieved by the application of cold.

Dr. O'Hara said that Dr. Chapman in his writings on the effects of the application of ice to the spine, which he had seen since writing his paper, also refers to the use of ice in croup and other diseases. The result in his case must have been due to the reflex action of the cold upon the brain. There is no doubt that this case recovered without a severe operation, and that an operation might have been the cause of his death. More precise rules for tracheotomy should be formulated from the teachings of experience.

Dr. Nancrede, having operated upon a number of cases, spoke from experience, in saying that paroxysmal dyspnœa was not an indication for operation so much as permanent laryngeal obstruction.

The Chairman had seen this case, which was a very interesting one, and believed it to be just the kind that had been referred to by Dr. Nancrede. There was no obstruction to expiration, but the stridor kept getting worse and worse. He had seen the same in adults, and Niemeyer speaks of seeing it in children, and considers it part of the history of croup. In adults there is nothing to be done but tracheotomy, which must be performed sooner or later, or the patient will perish.

The child he had been called in to see in consultation by Dr. O'Hara was suffering from the difficulty described, but as it was in apparent good condition, although just recovering from scarlet fever, he hesitated to recommend tracheotomy. Immediately upon the application of the ice to the neck, he took a deep inspiration. This artificial respiration was kept up for more than thirty hours, as mentioned, there being no deposit in the larynx and no obstruction to expiration.

He had another case in an adult recently in the same condition, but ice had no effect. Many of those cases where death from croup has occurred without deposit in the larynx are precisely like the present, and due to paralysis of the dilator muscles of the glottis. The device of putting the cloths between two blocks of ice is a good one, as it keeps them cold all the time.

In reply to a question from Dr. O'Hara, he stated that he never had had the courage to use electricity in this form of paralysis, for fear of exciting spasm of the glottis and killing the patient.

Compound fracture of anatomical neck of humerus. Presented by Dr. C. B. NANCREDE.

This specimen, and the case from which it was removed, have seemed of such unusual interest as to induce me to offer them for your consideration this evening. Similar injuries, or rather injuries requiring similar treatment, are not unusual in military practice, but are very rarely met with elsewhere. I will first show the specimen, next describe the injury, and then exhibit the results, after which I will explain my reasons for the course pursued. The portion which I hold in my hand is, as you see, the upper four and a quarter inches of the diaphysis of the left humerus, completely stripped of all muscular attachments and periosteum, except at its posterior aspect, where a triangular slip remains, a portion of it being very thin, evidently consisting of only a few of the deeper layers. This portion is the upper epiphysis, the line of fracture passing through the epiphyseal line except at one or two points. The shaft is slightly split, while the shell of bone connected with the head is fissured at various portions of its circumference, as if the shaft had been impacted, thus wedging it apart. Further description of the specimen is involved in the description of the case, which I will now proceed to give.

The patient, J. McC., a boy aged 14 years, fell from a tree some twenty-five feet upon his elbow, on the afternoon of Sunday, September 23, 1878, landing on the ground, striking in his fall against the limbs of the tree, and sustained the following injuries in addition to those just now detailed. The broken shaft was driven through the skin covering the lower portion of the deltoid muscle on its anterior aspect, tearing in its course the following parts. The insertion of the deltoid was completely stripped off with the subjacent periosteum; the coraco-brachial, teres major, and latissimus dorsi were in like manner torn off, the latter carrying with them the posterior lip of the bicipital groove. The tendon of the pectoralis major was torn off about half an inch from its insertion, and one if not both heads of the biceps were ruptured. In consequence the head and neck of the bone, deprived of periosteum, merely hung suspended from the glenoid cavity by its capsular ligament and the rotator muscles. The upper end of the lower fragment must have almost grazed the brachial artery, its point of emergence through the skin being not more than about three-fourths of an inch from its course. As you see, the patient now, about ten weeks since his injury, has a surprising amount of movement in his new joint. Seven weeks after the operation he removed his coat, vest, and shirt without assistance. He can readily put his hand to his mouth, behind his back, and on his ear. He enjoys perfect use of his forearm, but of course has lost nearly all power of lifting the arm from the side. All of these motions are unattended with pain. Although four and a half inches by actual measurement of the bone have been removed, the actual shortening only amounts to a scant inch and a half, the new joint having formed apparently on the third rib.

The course of treatment pursued, and my reasons for deciding upon it, seem worthy of detail, since such injuries are but seldom seen, and, as far as I can discover, no clear rules have been laid down for their treatment. To the members of this Society who devote themselves especially to surgery I need hardly say that no question of amputation arose in my mind; but to those in pure medical practice I would say that when the main vessels and nerves of a limb remain intact, the injury to the soft parts having been produced by the bone itself, not the fracturing force, almost any degree of shattering of the bones may be recovered from in the young without operation. Two lines of treatment then offered for consideration, viz., the simple return of the bone, closure of the skin-wound, drainage, and trusting the case to nature, or the resection of the injured bone. Theoretically the first would have seemed the better course, promising no shortening of the limb, and the retention, in a measure, of the power of the deltoid. In reality, however, the chances of union were not one in a thousand, and if not union then necrosis with its consequent shortening; necrosis, too, meaning months or years of inflammation and suppuration, matting the muscles together so that when recovery occurred—almost necessarily by an operation—the usefulness of the limb would be but slight. Resection, on the other hand, offered the complete removal of all injured portions of bone, and with them the most important factors of trouble after such an injury, thus permitting rapid healing, and the

least possible inflammatory adhesions of the muscles, tendons, etc. If the bone had been simply returned, the risk to life would have been greater, owing to the prolonged suppuration incident upon the separation of the necrosed bone and deep-seated abscesses so common after compound fractures. Against it was the absolute shortening of the arm, with the prospective cessation of growth due to the removal of one of the humeral epiphyses.

The actual result, I think, bears me out in the course of treatment pursued, for I hardly think that he would be here in as good condition, with the wound soundly healed, if I had followed what is often, but falsely, called the "conservative plan" of treatment. I believe that true conservatism indicated exactly what I did. The amount of shortening would not have been much less had the case been left to nature and necrosis. Had this occurred, union of the severed head could hardly have taken place; and then the same shortening would have obtained as surely as if the epiphysis had been removed. Army experience has shown that when a portion of the upper end of the humerus is removed for injury, nothing is gained by leaving the uninjured head, since it necroses. Although not cognizant of this fact of experience at the time of operation, anatomical knowledge, general surgical principles, and experience induced me to arrive at a conclusion by *a priori* reasoning which I have since found that extended experience had already proved. I believe, therefore, that theoretically and from experience, resection ought to be performed for such injuries. It is hardly necessary to say anything about the operation itself, since each case must be a rule for itself, the only point being to remove the bones with as little additional damage to the soft parts as practicable. The wound was dressed antiseptically, and when I transferred the wards to my colleague, Dr. Packard, no suppuration had occurred, and there was not the slightest inflammatory blush about the wound. He did uninterruptedly well, and the wound was soundly healed in less than seven weeks, the greater part at a much earlier date, however.

Dr. Charles T. Hunter believed that there had been positive reproduction of the bone. The shaft extends to lower margin of glenoid cavity, and he recognized the insertion of the pectoral and latissimus dorsi muscles. If the bone had been restored to its place, he believed that the periosteum would have regained its attachment; there is no doubt that the head ought to have been removed, as its nourishment by the anterior circumflex artery was cut off.

Dr. Nancrede said that the idea of saving the bone had occurred to him, but he had adopted what seemed at the time of the accident to offer the best results, in view of the possibility of necrosis.

Treatment of fractures of humerus.

Dr. R. J. Levis said that the case had been well treated, and the result was excellent. He had for a long time considered the ordinary routine treatment of fractures of the humerus in the vicinity of the shoulder as very unsatisfactory. The displacement ordinarily is of the upper fragment outwards. Representing, by a diagram, a fracture in the upper third, we find that the arm is shortened by the overlapping of the fragments. This shortening is easily overcome by carrying the elbow out from the body and making extension,—that is, bringing the lower fragment in a line with the upper one, which is tilted outwards. Keeping the fragments in this relation suggests the principle of treatment. In a case of this kind, recently, the patient had been treated only by the postural method,—lying in bed with his arm at right angles to his body. Surgeons are too apt to cover up such fractures with a cap and splints.

In the case of a colored woman, he had obtained good apposition by placing the hand upon the opposite shoulder, and in another case the forearm had to be placed behind the back. He had, for a number of years, discarded splints in treating fractures of the upper extremity of the humerus.

In these cases the displacement is due to the direction of the fracture, but there is no uniformity in the line of fracture or displacement. Each case is a rule for itself in the indications for treatment. His observation had led him to believe that fractures of the upper extremity of the humerus should be treated without splints by the postural treatment, using adhesive plaster to keep the arm across the body in the most favorable position; and possibly a pad may be needed in the axilla. By this means he was confident that better results can be obtained than by the usual practice.

FRANK WOODBURY, M.D.,
Reporting Secretary.

REVIEWS AND BOOK NOTICES.

CLINICAL DIAGNOSIS: A HAND-BOOK FOR STUDENTS AND PRACTITIONERS OF MEDICINE. Edited by JAMES FINLAYSON, M.D., etc. Pp. 546. Philadelphia, Henry C. Lea, 1878.

The title of Dr. Finlayson's convenient little book seems to invite criticism at the very threshold of acquaintance with it. Many kinds of diagnosis are known to us: surgical diagnosis and medical diagnosis are familiar terms; differential diagnosis and diagnosis by exclusion puzzled us more in our student days—and do yet, in truth—than did the rule of three at a remoter period. Do we not concern ourselves daily with the diagnosis of tumors, of fractures, of pregnancy, of maladies of the blood, of the nervous system, of mental states?

Is not diagnosis, variously qualified as it may be, so intimately bound up with the daily work of every practitioner of physic that without it there would be no proper work at all for him to do? And is not all this clinical diagnosis? The title would have had appropriateness etymologically if the work had been restricted to the consideration of the diseases that keep the patient in his bed, or, on the other hand, in the technical sense of "clinical," if its contents had included the widest ranges of diagnosis in morbid states of every kind. A better name for the book as it stands would have been "Medical Diagnosis," had that not been pre-empted.

But this fault-finding is with the book's name, not with its nature.

The editor has been his most generous and at the same time his best contributor, by far the greater part of the work being written by his hand. His co-workers, though few in number, have, however, done excellent work in contributing to the completeness of the hand-book as a whole and in securing its accuracy in the several departments.

The opening chapter, on the Physiognomy of Disease, by Professor Gairdner, is written in his most attractive vein. It abounds in practical information, and in that happy quality so often wanting in medical literature,—suggestiveness.

The chapters on Case-Taking and the Disorders of the Various Systems, by Dr. Finlayson, are evidently the result of much faithful work in arranging and condensing. That the clinical knowledge here laid before the reader has been collected and verified by long habitual daily work in actual contact with the sick is evident upon every page.

The chapters on Insanity, and those upon the Symptoms of Diseases of the Male and Female Generative Organs, though less closely related to clinical medicine than the others, are of a practical character, and are made to fit into the general plan of the book in a most admirable manner.

The long chapter on the Physical Examination of the Chest and Abdomen is based chiefly upon the work of Professor Gairdner and the teachings of Dr. Gee.

Finally, we have a concise explanation of the manner of conducting *post-mortem* investigations in hospitals and in private dwellings, and a very brief description of some modes of preserving specimens for future examination.

There are eighty-five well-drawn cuts, mostly accredited to the source from which they were obtained. Errors in the proof are rare, as befits a book re-printed by "Collins, Printer." We noticed, however, a phrase repeated (pp. 336, 337), and Glasserian instead of Gasserian (p. 162). There is a copious index. The book is an excellent one,—clear, concise, convenient, practical. It is replete with the very knowledge that the student needs when he quits the lecture-room and the laboratory for the ward and sick-room, and does not lack in information that will meet the wants of experienced and older men. J. C. W.

GLEANINGS FROM EXCHANGES.

ON THE NATURE OF THE SPECIFIC POISONS OF THE ZYMOTIC AND SEPTIC DISEASES (*The Lancet*, November 23, 1878).—Dr. Reginald Southey, in a lecture on hygiene, makes the following interesting generalizations concerning the ultimate nature of various organic contagia:

From facts recorded of infection and poisoning by communicable disease, it is reasonable to believe that different animal contagia have different atomic forms, different atomic weights, distinct vitalities, resist destruction differently; are some direct or immediate, some indirect or intermediary in their course from their starting- to their sticking-point, from their discharge from the first infected individual to their arrest in the wounded person. Let us inquire into all these matters.

For communicable disease to spread, three things are requisite: (1) an infecting poison, an animal cell or graft, some germ or microspore, or some potential fluid; (2) some means of connection or insertion of this poison; (3) receptivity or aptitude in the person who receives this poison.

If the atomic form of the poison is large, it may be believed to be heavy; the larger, the heavier, and more tangible it is, the less readily will it travel from person to person. The contagiousness of the disease communicated will therefore appear immediate or most direct: those nearest in contact with the infected person will suffer most. If, although heavy, its vitality is great, it may be conveyed about by clothes or fomites. If its vitality is small and it is quickly destroyed by diffusion through air or water, it will not travel far, and must be inserted quickly in a fresh body to provoke its special reaction.

There is much reason to think that the plague poison, syphilis poison, the smallpox and typhus poison, is of this heavy form and low vitality. But the poison of cholera and typhoid fever is probably an example of a lighter, subtler substance, and one of greater vitality; since, although sometimes carried into the body by food or water contaminated by human alvine excreta, the cholera poison is probably also borne in the blue mists observed in most cholera epidemics; and neither the cholera nor the typhoid poison appears to be destructible, although diluted in any quantity of cold water. The syphilis poison probably quickly loses its vitality or propagating powers: once dried, Dr. Southey believes its life-history is ended. But the variola and varioloid poison may be dried, and, if neither frozen nor overheated, like mummy grain, it

will certainly retain its infecting properties for years. So, too, the scarlet-fever, yellow-fever, plague, and typhus poisons can lie dormant in a drawer or cupboard for weeks, or months, or years, awaiting the conditions which shall favor future development. The plague is said to have broken out afresh after a hundred years in consequence of the re-opening of a plague-pit.

While most poisons are direct, although of greater or less vitality, it is possible that some require the fulfilment of some special developing conditions between the time of their discharge from one individual and their insertion into another.

HOT WATER IN THE TREATMENT OF LACERATED AND CONTUSED WOUNDS (*The Hospital Gazette*, October 31, 1878).—Dr. Frank H. Hamilton reports two cases of the successful treatment of lacerated and contused wounds by the application of cotton batting soaked in water from 100° to 110° Fahr. and renewed every half-hour. In one of these cases a remarkable recovery from spreading traumatic gangrene took place.

Dr. Hamilton, after reviewing these cases, adds, "In using warm or hot water, wherever it is practicable, the bath or complete submersion of the injured member is always to be preferred, the limb being suspended in the water without sutures, adhesive strips, bandages, or dressings of any kind. If there should be any cause for delay, after the infliction of a severe lacerated wound, in resorting to the bath, it will be because there might be some apprehension of hemorrhage being thereby invited and promoted. But, if the vessels are properly tied, this delay need not extend beyond twelve or twenty-four hours.

"It is seldom found necessary to continue the bath beyond the seventh or tenth day, or beyond the period of active inflammation, and it is even sometimes quite objectionable to continue it beyond this period, on account of the œdema which is apt to ensue, the œdema being in part due to the necessarily dependent position of the limb, and also in part to the endosmosis of the water by the open tissues. After this period the warm-water or hot-water (as the case may demand) fomentations are to be preferred,—the limb being laid, as in the case of an arm, upon a pillow covered with oil-cloth and enveloped with large masses of cotton batting saturated with water. Even during the period of acute inflammation, if the patient becomes weary of the confinement of the limb to the bath, the fomentations may be substituted during the night or any other time when it may seem to be necessary.

EXAMINATION OF SEMINAL STAINS FOUND ON THE WOODEN FLOOR OF A ROOM.—Dr. Gallard, in an article in the *Gazette des Hôpitaux*, 1878, No. 44, arrives at the following conclusions: 1. The examination of these stains may give as authentic results as that of stains on linen or clothes. 2. If the semen form a sort of slightly adherent varnish on the floor, the flakes of which are easily separated, the examination is less difficult than when it has to do with linen or cloth, as it is only needful to dissolve the dried semen in a little distilled water. But if the semen have soaked into the wood, a little water must be placed in contact with the stain for a time, and the wood must be scraped with a scalpel.

PRESSINERVOSCOPY.—This is the formidable name devised by Dr. August Pinel, of Paris, for a method of diagnosis of diseases of the chest and abdomen by compression of the pneumogastric and sympathetic nerves. By compression with the fingers on any portion of these nerves, and the peculiar sensations thereby produced, Dr. Pinel professes to be able to define the seat and nature of the malady from which a patient may be suffering. M. Burggraeve has declared that as a means of diagnosis it is even superior to stethoscopy or pleximetry.

MISCELLANY.

A PRIZE of one hundred pounds for an essay on hydrophobia, its nature, prevention, and treatment, is offered by V. F. Benett Stanford, Esq., M.P., to be awarded by the Royal College of Physicians of London. The conditions under which the prize is to be competed for are the following:

1. The essay must be in English, or accompanied by an English translation.
2. The essay must be delivered to the College on or before January 1, 1880.
3. Each essay to be accompanied by a sealed envelope containing the name and address of the author, and bearing a motto on the outside, the same motto to be inscribed on the essay.
4. The essay may be the joint production of two or more authors.
5. The essay, if not published by the author within a year, to become the property of the College.
6. The prize not to be awarded unless an essay of sufficient merit be presented.

The questions which are thought by the College specially to require investigation are:

1. The origin and history of outbreaks of rabies, particularly in the United Kingdom and its dependencies.
2. The best mode of prevention of rabies.
3. The characteristics of rabies during life, and the anatomical and chemical changes which are associated with the disease in its successive stages, particularly in its commencement.
4. The origin of hydrophobia in man.
5. The chemical and anatomical morbid changes observed in the subjects of the disease, with special reference to those having

their seat in the organs of the nervous system and in the salivary glands.

6. The symptoms of the disease, particularly of its early stage, as illustrated in well-observed cases.

7. The diagnosis of the disease in doubtful cases, from conditions more or less resembling it.

8. The alleged prolonged latency of the malady.

9. The efficacy of the various remedies and modes of preventing the disease which have been proposed, and what plan of treatment, whether prophylactic or curative, it would be most desirable to recommend for future trial.

DIDACTIC LECTURES ON DERMATOLOGY AT THE UNIVERSITY OF PENNSYLVANIA.—A course of didactic lectures upon dermatology—the first, we believe, ever delivered in this city—is now being given by Prof. Duhring in the University of Pennsylvania. Although no examinations on skin diseases are held in the medical course, yet these lectures of Prof. Duhring's are well attended by the advanced students. The lectures thus far have been upon the subjects of anatomy, general symptomatology, etiology, pathology, diagnosis, treatment, prognosis, and classification. The remainder of the course will be devoted to the consideration of the specific diseases. Dr. Geo. B. Wood's collection of wax models deposited in the University museum, as well as Prof. Duhring's large collection of plates, water-colors, photographs, etc., afford ample illustrative material, and the students of the University are to be congratulated upon the advantages afforded them for acquiring a knowledge of this very practical branch of medicine.

DECLINE OF HOMŒOPATHY.—Were we to write anything like the following, we should be charged with unfairness and misrepresentation, or perhaps, in the elegant language of a certain distinguished homœopathic professor of surgery, with "giving expression to bigoted and slanderous statements." The extract is from the *Homœopathic Times*, the leading organ of homœopathy in this country.

"Accessions to our ranks are derived from only two sources: those who are educated under homœopathic auspices, and converts from the so-called regular school. Of the first class named, those who have graduated from our own medical schools, there were the present year only three hundred and nineteen, a number so small as to be scarcely sufficient to fill the places made vacant by death and other causes. It is plainly apparent, therefore, that recruits from this source must be largely increased, or else we must depend chiefly on the second class mentioned, viz., converts from the so-called regular school.

"On even a cursory examination in this direction, the result is exceedingly unpromising. Those of us who were participants in the contest between the two principal rival schools can vividly recall the scenes which occurred twenty and even fifteen years ago. Then there were constant accessions to our ranks from those of our opponents. Desertions were so numerous as to impair the strength of allopathic legal organizations, and, in some localities, seriously threaten their existence. At the present day the exodus has nearly ceased. The comparatively few converts who are willing, openly, to admit their belief in homœopathy, may be numbered by tens, while formerly there were hundreds.

"Whatever the influences have been which have checked the outward development of homœopathy, it is plainly evident that the homœopathic school, as regards the number of its openly avowed representatives, has attained its majority, and has begun to decline both in this country and in England."

The February number of the London monthly *Homœopathic Review* contains the following significant statement: "The number of those who are ready to assert their confidence in homœopathy may not have increased of late years, it may possibly have diminished," etc., etc.

Dr. Drysdale, in the *British Journal of Homœopathy*, writes very despondingly: "Our numbers are not only not increasing in proper ratio, not even increasing at all, nay, even *actually diminishing*."—*Michigan Medical News*.

THYMOL.—This substance, which, on account of its being so much more agreeable than carbolic acid, bade fair to come largely into use as an antiseptic, appears not to be sustaining its first reputation. In the recent Surgical Congress at Berlin, the general voice was strongly against its efficiency, and much complaint was made of the swarms of flies attracted by it. It has also proved a failure at the Roosevelt and New York Hospitals,—the wound acting under it almost as under a non-antiseptic dressing.

THERE were 21,682 deaths from snake-bite and wild animals in India in 1877.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 15 TO DECEMBER 28, 1878.

JANEWAY, J. H., MAJOR AND SURGEON.—Assigned to temporary duty at Fort Wood, New York Harbor. S. O. 231, Department of the East, December 16, 1878.

TILTON, H. R., MAJOR AND SURGEON.—Par. 5, S. O. 245, A. G. O., November 12, 1878, granting him an extension of his leave of absence for two months, is amended to grant said extension on Surgeon's Certificate of Disability. S. O. 274, A. G. O., December 21, 1878.

BROWN, H. E., CAPTAIN AND ASSISTANT-SURGEON.—From and after January 1, 1879, to take station at Camp Guilford D. Bailey, Texas. S. O. 264, Department of Texas, December 16, 1878.

KINSMAN, J. H., CAPTAIN AND ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 104, Division of the Atlantic, December 23, 1878.

LORING, L. Y., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Hays, Kansas. S. O. 226, Department of the Missouri, December 12, 1878.